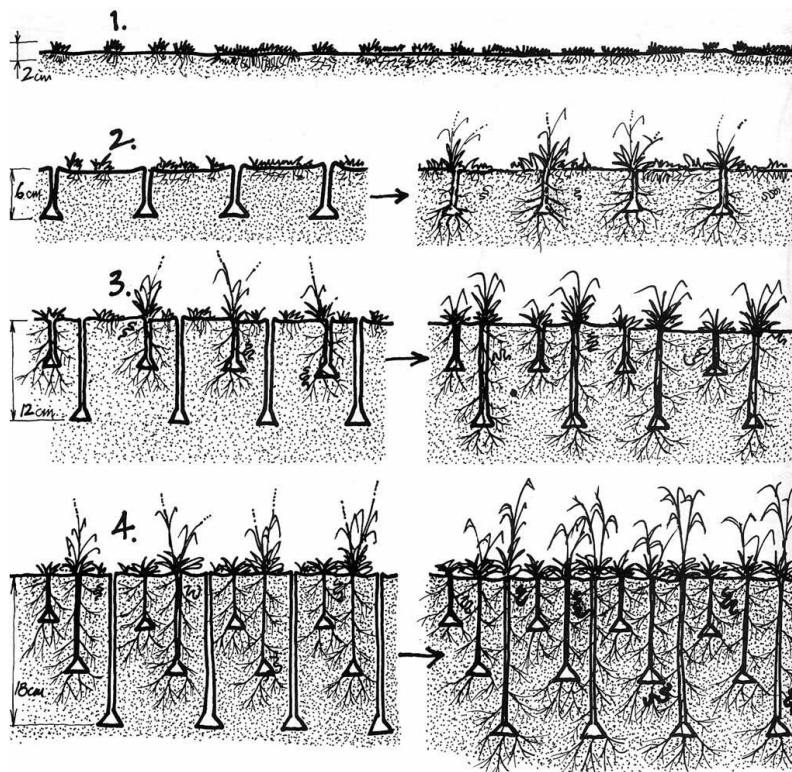


## Yeomans plough, Keyline Farming and Water Harvesting

PA Yeomans –“1.6% increase in organic matter in topsoil on 12% of the earth's surface would reduce atmospheric CO2 levels by 100ppm (ie to pre 20th century levels) and solve the global warming crisis”



Consider this with the fact that most of Australia's farm land is currently less than 2% organic matter and a good organically, cheaply and holistically farmed topsoil is approx 8% organic matter.

As well as capturing all the 'greenhouse gas', more importantly to farmers all the organic matter (humus, grass roots, soil food web) holds very high amounts of water and nutrients in that top soil zone. Creating a much healthier and resilient pasture system.

### Achieving Deep Soil

The deep and narrow cut of the fixed tine Yeoman plough aerates and allows water to penetrate into the soil without turning over the soil and accelerating oxidisation. This basic aeration is vastly improved with the use of in line seeding systems and Compost tea enrichment in the plough lines.

Progressively deeper parallel rips several months apart allow air, nutrients, soil biology and plant/pasture roots to go deeper and deeper, increasing the depth of topsoil each time.

A similar method was followed by highly regraded farmer Masanobu Fukuoka without machinery which was achieved with deep wide rooted plants like Diakon Radish, Comfrey, Lupins etc. Yeomans is another permaculture technique allowing accelerated soil development modelled on nature's systems.



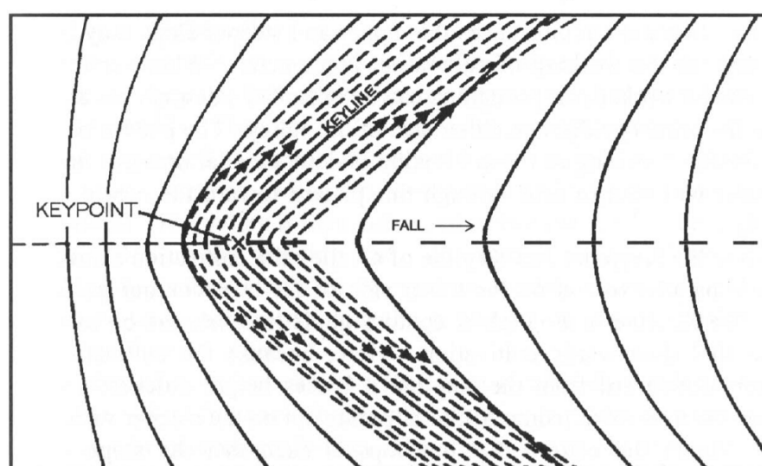
From Darren Doherty's work over east, in 1 year, with Keyline ploughing and compost tea and then seeding/planting, farms have gone from no topsoil to 300mm (or from 2% to 8% organic matter)

OUR CHALLENGE ACHEIVEMENT OF THIS IS SANDY EXCEPTIONALLY POOR WA SOILS.



An additional key concept of Yeomans Keyline Farming and water harvesting techniques is that passive water harvesting is carried out in many ways on contour. That is swales, tree belts, dams and all aspects of the water harvesting system are designed on contour and crucially are caught and stored as high in the land (hills) as possible.

**Water for Every Farm - Yeomans Keyline Plan**



**Figure 10 A contour diagram illustrating Keyline cultivation for a primary valley . The broken lines show cultivation parallel to the Keyline both up and down the slope.**

Keyline farming techniques and Regen Ag are key methods to improve WA farming techniques in a rapidly degrading and drying landscape. The concepts are quite simple but hard to initially grasp, so get a copy of, *Water for Every Farmer*, P.A. Yeoman, or **have look for further information on the PermacultureWest website, and watch the calendar of events for Keyline farming and RegenAg courses coming to WA soon.**